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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,753	09/23/2003	James L. McArdle	58717US002	1787
32692	7590	08/21/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			MARCHESCHI, MICHAEL A	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 08/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/668,753

Applicant(s)

MCARDLE ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-8, 10-24, 26-29 and 31-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 10-24, 26-29 and 31-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/30/06, 5/5/06, 6/22/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 28 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The size limitation of claim 28 is outside the scope of claim 23 since claim 28 does not define an upper limit.

Claims 1-3, 5-8, 10-24, 26-29 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoopman et al. (248) in view of Abrahamson for the same reasons set forth in the previous office actions which are incorporated herein by reference.

New claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoopman et al. (248) because the reference teaches a size for the abrasive which encompasses the claimed size.

Claims 1-3, 5-8, 10-24, 26-29 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoopman et al. (217) in view of Abrahamson for the same reasons set forth in the previous office actions which are incorporated herein by reference.

New claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoopman et al. (217) because the reference teaches a size for the abrasive which encompasses the claimed size.

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Applicant's arguments filed 10/14/05 have been fully considered but they are not persuasive.

Applicants argue (incorporated from the previous responses) that the references do not teach the combination of features recited in claims, namely the abrasive size and composite height. As clearly defined in the last office actions, the claimed features are encompassed by the disclosure of the references. Applicants argue that the two Hoopman et al. references do not teach the claimed invention in view of the unexpected results obtained in the examples and the **declaration** submitted on 3/24/05 (i.e. recognize the benefits of the claimed combination of abrasive size and composite height (topography)). The examiner acknowledges these results, however, this is not persuasive because applicants have **not** clearly established criticality for the claimed values because to establish unexpected results over a claimed range, applicants should compare a **sufficient number of tests both inside and outside (i.e. as well as the upper and lower limits) the claimed range** to show the criticality of the claimed range. **In re Hill 284 F.2d 955, 128 USPO 197 (CCPA 1960)**. For example, the prior art of record teaches abrasive sizes of 400 microns (which is applicants upper limit of claim 1, etc.) yet the results defined in the examples and declaration only define an abrasive size of at **most** 300 microns. Although the declaration defines a size of 300 microns (size in some dependent claims), the declaration does not show results when this size is used in combination with a composite height that is entirely within the scope of at least 500 microns, as claimed (the declaration only shows a maximum composite height of 1016 microns, however, the interpretation of 'at least 500 microns', as claimed, can be well above this value).

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In addition, applicants never show a comparison of lower limit of the claimed combination of ranges (i.e. an abrasive size of 100 microns (this value is also literally disclosed by the reference) with an abrasive composite height of at least 500 microns). How can one establish criticality for the lower limits of ranges if **no** comparative evidence for the combination of these values is defined? At most, the examples and declaration might show results for a **limited** combination of abrasive sizes and composite heights for specific composites in terms of the composition thereof. The examiner is unclear as to how a showing of only a selected few values provides criticality for the entire range and all possible composite composition, as claimed. Finally, any showing of criticality in the examples and declaration is **not** commensurate in scope with the **broad ranges, as claimed.**

In summary, criticality for the claimed ranges, when compared to the reference ranges, has **not** been established because **a sufficient number of tests both inside and outside (i.e. as well as the upper and lower limits) of the claimed range** has not been defined in order to clearly show the criticality of the claimed range. Applicants have not shown a sufficient number of range combinations to establish a basis for which criticality can be established.

**Evidence of unexpected results must be commensurate in scope with the subject matter claimed. In re Linder 173 USPO 356.**

Applicants apparently are arguing that the instant invention provides benefits over the above references (i.e. grinding test results), however, since the references literally teach sizes and heights which can fall within the claimed values and applicants have **not** clearly shown evidence of unexpected results, no patentable distinction is seen to exist. This is apparent because the claimed results are expected in the articles of the references (these results are dependent on the

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combination of sizes and heights and since these limitations are known in the references, the grinding results are expected because the same article is expected to yield the same result).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/06  
MM

Michael A. Marcheschi  
Primary Examiner